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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/977,984	10/17/2001	Mike Reeves	53921/90	4341

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EXAMINER	
MURPHY, RHONDA L	
ART UNIT	PAPER NUMBER
2616	

DATE MAILED: 07/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/977,984	REEVES ET AL.	
	Examiner	Art Unit	
	Rhonda Murphy	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 June 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-9 and 12-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-9,12-16,21 and 22* is/are rejected.

7)☒ Claim(s) *17-20* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 October 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/26/06 has been entered.

Accordingly, claim 2 has been canceled and claims 1, 3-9 and 12-22 are currently pending in this application.

Claim Objections

2. Claim 1 is objected to because of the following informality: On line 4, "path" shall be added after the terms "said connection", in order to maintain consistent claim language. Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1, 3-9 and 12-16 and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohba et al. (US 2002/0176370) in view of Kwon (US 6,434,112).

Regarding claim 1, Ohba teaches a method of attempting to establish a connection path between first and second nodes over at least one intermediary node (page 7, paragraph 108) in an MPLS routing domain established within an IP ATM network (page 1, paragraph 5), said method comprising attempting to establish said connection path after a period of time has elapsed (page 8, paragraph 121; retransmitting the label allocation message...after a prescribed period of time).

Although Ohba teaches retransmissions at prescribed time periods, Ohba fails to explicitly disclose said time period being greater than a previous interval of delay. It is well known in the art that retransmission attempts can be performed within a time period that is greater than a previous time period.

Furthermore, Kwon discloses attempting to establish said connection after a period of time has elapsed which is based on a previous interval of delay between two

previous attempts and the time period being greater than a previous interval of delay by a predetermined time value (col. 3, lines 50-59).

Therefore, it would have been obvious to one skilled in the art to modify Ohba's method by including a time period being greater than a previous interval, so as to optimize system resources (Kwon col. 2, lines 7-10) by increasing the time period in which the reconnection attempts are made, thus decreasing the retry attempts and maximizing bandwidth usage.

Regarding claim 3, Ohba teaches a threshold associated with the number of retransmissions (page 8, paragraph 121). Thus, indicating a period of time that does not exceed a maximum time value.

Regarding claim 4, Ohba teaches an MPLS system involving the connection of label switched paths (page 1, paragraphs 2 and 4).

Ohba fails to explicitly disclose a soft permanent label switched path.

However, MPLS systems include a label distribution protocol (LDP) that implements soft permanent label switched paths through the use of a network operator. Therefore, it would have been obvious to one skilled in the art to incorporate a connection path that is a soft permanent label switched path, for the purpose of enabling a network operator to automatically establish the path.

Regarding claim 5, Ohba teaches retransmitting the label allocation message after a prescribed period of time (page 8, paragraph 121).

Ohba fails to explicitly disclose a time period of 10 seconds.

However, a prescribed time period can be a fixed length of any amount of time. Therefore, it would have been obvious to one skilled in the art to include a fixed time value of ten seconds, so as to initiate retransmission every ten seconds.

Regarding claim 6, Ohba teaches a method of timing attempts to establish a connection over at least one intermediary node (page 7, paragraphs 108-109) in an MPLS routing domain established within an IP ATM network (page 1, paragraph 5), said method comprising: having a timer arrangement tracking passage of a regular interval of time (page 8, paragraph 121; retransmitting the label allocation message...after a prescribed period of time); having a list of records relating said plurality of requests for connections (page 7, paragraph 110; information stored in tables); selecting one record from said list (page 15, paragraph 219 & 221); attempting to establish a connection relating to said one record (page 15, paragraph 221; checking flow ID); and if said connection relating to said one record is established, then marking said one record as being successful (page 15, paragraph 225), otherwise, re-attempting to establish said connection at successive intervals increasing by said regular interval (as previously described in page 8, paragraph 121).

Ohba fails to explicitly disclose increasing the regular interval.

However, Kwon discloses increasing the regular interval (col. 3, lines 50-59).

Therefore, it would have been obvious to one skilled in the art to modify Ohba's method by increasing the regular interval, so as to utilize system resources more efficiently (Kwon col. 2, lines 7-10) by increasing the time period in which retry connection attempts are made.

Regarding claim 7, Ohba teaches selecting one record from said list comprising: having a time field in said list of records (page 1, paragraph 7; TTL field); on each said regular interval of time for each entry in said list of records: decrementing a time value in said time field (page 1, paragraph 7; decremented by one); and if said time value is zero for an entry is zero, then selecting said entry as said one record (further described on page 18, paragraph 260; count is 0 and message is transmitted to the next hop node).

Regarding claim 8, Ohba teaches retransmitting the label allocation message after a prescribed period of time and a threshold associated with the number of retransmissions (page 8, paragraph 121). Thus, indicating a time interval that does not exceed a maximum time value.

Regarding claim 9, Ohba teaches retransmitting the label allocation message after a prescribed period of time (page 8, paragraph 121).

Ohba fails to explicitly disclose a maximum time value of sixty seconds.

However, a prescribed time period can be a time value of any length. Therefore, it would have been obvious to one skilled in the art to include a maximum time value of sixty seconds, so as to initiate retransmission every sixty seconds.

Regarding claim 12, Ohba teaches a method of establishing a label switched path (LSP) over an MPLS routing domain established within an IP over ATM network, comprising the steps of:

receiving a LSP setup request for connecting an ingress node in said MPLS routing domain with an egress node (page 5, paragraph 83);

defining a unique LSP ID for said LSP and establishing a signaling link between said ingress and egress node, by creating a session at said ingress node, egress node and each hop along said LSP (page 5, paragraph 83);

establishing said LSP for transmitting traffic along said LSP between said ingress and egress node (page 5, paragraph 87).

Ohba fails to explicitly disclose an LDP session and associating the LDP sessions to an LSP. However, Examiner takes official notice that LDP sessions are known in the art as a protocol for distributing the labels associated with LSPs within MPLS networks. In view of this, it would have been obvious to one skilled in the art to include such LDPs sessions, so as to distribute labels associated with LSPs.

Although Ohba teaches a timing mechanism related to the connection attempts (page 7, paragraphs 102-104), Ohba fails to explicitly disclose providing at said ingress node a retry time based on a back off mechanism for enabling successive attempts to establish said LSP at increasing retry intervals.

However, Kwon teaches a retry time based on a back off mechanism for enabling successive attempts to establish a path at increasing retry intervals (col. 3, lines 50-59).

In view of this, it would have been obvious to one skilled in the art to modify Ohba's method by including a back off mechanism, so as to utilize system resources more efficiently (Kwon col. 2, lines 7-10) by increasing the time period in which retry connection attempts are made.

Regarding claims 13 and 16, the combined method of Ohba and Kwon teach a back off mechanism for increasing retry intervals. Although Ohba teaches retransmissions at

prescribed time periods (page 8, paragraph 121; retransmitting the label allocation message...after a prescribed period of time), Ohba fails to explicitly disclose said retry timer providing an initial retry interval of T seconds, and each next successive retry interval is longer than a previous period of time by T seconds.

Since Kwon teaches a retry time in which each next successive retry interval is longer than a previous period of time, it would have been obvious for the period of time to be greater than another period of time by T seconds, so as to reattempt establishing connections at a specific time interval, being T seconds in duration.

Regarding claim 14, Ohba further teaches the sum of the increasing retry interval does not exceed a maximum time value (page 8, paragraph 121; a threshold associated with the number of retransmissions; thus, indicating an interval that does not exceed a maximum time value).

Regarding claim 15, Ohba teaches said LSP as a signaling LSP (page 1, paragraph 14; it is known in the art that LSPs are signaling LSPs).

Regarding claim 21, Ohba teaches establishing signaling links between ingress and egress nodes (page 5, paragraph 83; label switched paths).

Ohba fails to explicitly disclose establishing at least another signaling link between said ingress and egress node, and selecting one of said signaling link and said another signaling link utilizing a round robin algorithm.

However, Examiner takes official notice that it is known in the art for additional signaling links to be established between ingress and egress nodes. Furthermore, the selection of the signaling links can be performed by various methods, including a round

robin algorithm. Therefore, it would have been obvious to one skilled in the art to include another signaling link, so as to set-up another path between nodes and further select the path by a round robin algorithm in order to alternate use of the paths.

Regarding claim 22, Ohba teaches establishing signaling links between ingress and egress nodes, but fails to explicitly disclose not selecting any of said signaling links whenever said network does not have sufficient resources for establishing one of said signaling links.

However, it would have been obvious to not select any signaling links when the network does not have sufficient resources, since the network would be incapable of fully supporting the signaling information.

Response to Arguments

1. Applicant's arguments with respect to claims 1, 3-9, and 12-22 have been considered but are moot in view of the new ground(s) of rejection. The combination of Ohba and Kwon teach a method of establishing a connection path between first and second nodes comprising attempting to establish said connection path after a period of time has elapsed which is based on a previous interval of delay between two previous attempts, wherein said period of time is greater than said previous interval of delay by a predetermined time value. Applicant disagreed with the motivation "to utilize system resources more efficiently" when combining a reference describing the greater time interval, with the Ohba reference. Examiner respectfully disagrees. One skilled in the art would understand a greater period of time in between the attempts to establish a

connection would utilize system resources more efficiently since a node will utilize less bandwidth by increasing the length of time in between connection attempts. Furthermore, Kwon discloses such increase in time between connection attempts will improve network efficiency (col. 2, lines 7-10).

Allowable Subject Matter

2. Claims 17-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rhonda Murphy whose telephone number is (571) 272-3185. The examiner can normally be reached on Monday - Friday 8:00 - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (571) 272-3126. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Rhonda Murphy
Examiner
Art Unit 2616

RM

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